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TAXONOMIC NOTES ON *COLUBRINA* (RHAMNACEAE)

GUY L. NESOM
2925 Hartwood Drive
Fort Worth, Texas 76109
guynesom@sbcglobal.net

ABSTRACT

Colubrina stricta Engelm. ex Blankinship (not Engelm. ex M.C. Johnston) has previously been regarded as a rare and widely scattered species of Texas and northern Coahuila and Nuevo León, Mexico, but is treated here as including *C. texensis* var. *pedunculata*, a taxon of Chihuahua, Coahuila, and Durango, much broadening its range. ***Colubrina texensis*** (Torrey & A. Gray) A. Gray occurs in south-central Texas and in northern Coahuila, Nuevo León, and Tamaulipas and is partly sympatric with *C. stricta* but morphologically distinct and apparently non-intergrading. The isolated population system identified as *C. stricta* in El Paso County is geographically disjunct and atypical in morphology but variants occur elsewhere in the overall range as well. ***Colubrina greggii*** S. Wats. has previously been regarded as having three varieties, but each of the three is treated here at specific rank: *Colubrina greggii* sensu stricto is widespread in eastern Mexico, with a single population in southeastern Texas; **Colubrina angustior** (M.C. Johnston) Nesom, comb. et stat. nov., apparently is relatively narrowly localized in east-central Mexico (San Luis Potosí, Veracruz, and Tamaulipas); **Colubrina yucatanensis** (M.C. Johnston) Nesom, comb. et stat. nov., is an abundant species of the Yucatán Peninsula (Petén, Guatemala, and Campeche, Quintana Roo, and Yucatán), long-disjunct from the range of typical *C. greggii*. Geographic range maps and images showing variability are included.

KEY WORDS: *Colubrina*, taxonomy, Rhamnaceae, Texas, Mexico, Guatemala

Colubrina stricta has been regarded as a rare and widely scattered species of Texas and northern Coahuila and Nuevo León, Mexico (e.g., Johnston 1969, 1970, 1971; Poole et al. 2007), but during preparation of the FNAM (Flora of North America North of Mexico) treatment of Rhamnaceae, study of the species shows it to be the same taxon as *C. texensis* var. *pedunculata*, which extends the distribution further southward through Coahuila into Chihuahua and Durango. Typical *Colubrina texensis* (Torrey & A. Gray) A. Gray occurs in shrubland of south-central Texas and closely adjacent regions of Coahuila, Nuevo León, and Tamaulipas, Mexico.

Distinctive features of the two species are compared the key couplet below, which closely follows Johnston's comparison (1971) of var. *texensis* and var. *pedunculata*.

1. Flowers 1 or 2–4(–7), pedicellate in fascicles (no peduncle) arising from many-noded short shoots usually with 2 or more clustered leaves; pedicels 2–4 mm long, elongating in fruit to 6–13 mm, usually straight; branches markedly zig-zag ..... **Colubrina texensis**
1. Flowers (1–)2–8, in pedunculate thyrses (peduncles ca. 1 mm long) arising from axils of solitary leaves; pedicels 1–2 mm long, elongating in fruit to ca. 5 mm, usually strongly reflexed; branches relatively straight ..... **Colubrina stricta**

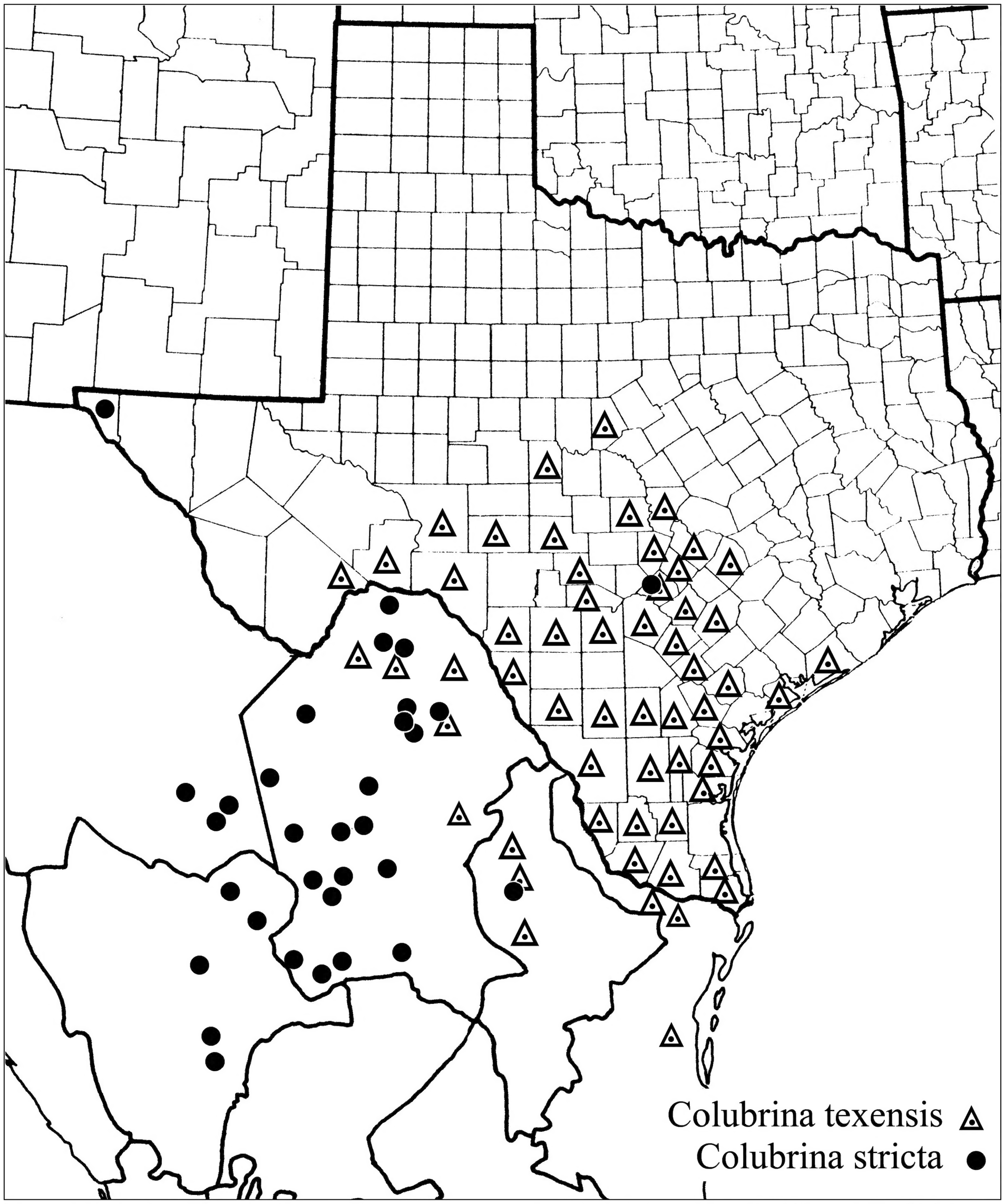


Figure 1. Distribution of *Colubrina texensis* and *C. stricta*, based on collections at TEX-LL and SMU-BRIT. Johnston (1971) noted that *C. texensis* occurs in Texas "north to Concho, Brown, and Travis counties" — no collections have been seen in the present study from or Brown Co. but it is added to the map fide Johnston's observation.

COLUBRINA TEXENSIS (Torrey & A. Gray) A. Gray, Boston J. Nat. Hist. 6(2): 169. 1850. *Rhamnus texensis* Torrey & A. Gray, Fl. N. Amer. 1(2): 263. 1838. **TYPE**: **USA**. **Texas**. No other locality data, 1833 or 1834, *T. Drummond II 67* (probable holotype: NY digital image!; isotypes: GH, US digital image!). Johnston (1971) cited this: "(HOLOTYPE: GH ISOTYPES: E-GL, NY, P, US, W!)."

Johnston (1971) cited the GH specimen as the holotype, but as noted by the GH database (HUH 2013), the Gray Herbarium received the specimen in 1870, considerably after the original publication. Another Drummond collection of *Colubrina texensis* — with II 67, Third Collection, 1835, *Drummond s.n.* (K digital image!) — was annotated by Johnston in 1963 as "not the type coll.; the type was from Drummond's second collection, not third." The K specimen is mounted on the same sheet as *Wright* [*45*] ("Expedition from Western Texas to El Paso, May-Oct 1849).

The original description of *Rhamnus texensis* cited only "Texas, *Drummond*! (coll. 2, no. 67.)." No other locality data were provided by Torrey and Gray, but Drummond spent nearly two years in the region of Texas from Victoria to Matagorda, Brazoria, and Harris counties northwestward to Gonzales County (Geiser 1948). In that area, the species is known today from Victoria, Matagorda, and Gonzales counties. In transferring the species to *Colubrina*, Gray in 1850 described the geography as "Prairies and borders of woods on the Guadaloupe and Comale. (Also communicated by Mr. Wright.)," noting that "we at length are provided with complete specimens," probably alluding to collections in 1849-1850 by Lindheimer from Comal County (Poole et al. 2007; see digital image at K cited above).

Lindheimer collections of *Colubrina texensis*. **Texas**. Probably all Comal Co.: no other locality data, Texas exsiccatae, Fasc. III, 1846, *Lindheimer 365* (K digital image!, TEX); no other data, 1849-1850, *Lindheimer 424* (K digital image!); Comanche Spring, New Braunfels, etc., Mar 1850, *Lindheimer 708* (BRIT, TEX); Comanche Spring, New Braunfels, etc., May 1850, *Lindheimer 709* (TEX); Comanche Spring, New Braunfels, etc., Jun 1850, *Lindheimer 710* (TEX).

Miscellaneous other collections of *Colubrina texensis* from Comal Co.: 1 mi E of Sattler on River Road, ca 10 mi N of New Braunfels, cedar-oak woods on limestone and chert mix, shrub 1 m, fls white, 8 May 1992, *Holmes 5668* (BRIT, TEX, VDB); shrub of limestone bluffs, Bleiders Creek by Loop Rd, N side of New Braunfels, 17 May 1982, *Kral 68538* (VDB); New Braunfels, Comal River, thorny bush, 6 May, 1909, *Lewton 713* (LL).



Figure 2. Fasciculate inflorescence of *Colubrina texensis*. Left, Coahuila, *Pinkava 15560* (ASU), from SEINET. Right, Hays Co., Texas, photo by Bob Harms.



Figure 3. Flowering branch of *Colubrina texensis*. Val Verde Co., Texas, photo by Bill Carr.

Johnston (1971, p. 43) noted that *Colubrina texensis* shows "the extremes of xeromorphic reduction in the genus, in which the inflorescence is almost totally reduced." The characteristic and presumably primitive type of inflorescence in *Colubrina* is a pedunculate thyrse or cyme (Fig. 4), while in *C. texensis*, a peduncle is lacking (Figs. 2, 3). The epithet chosen by Johnston for the "pedunculata" variant alluded to the distinction in inflorescence.

Leaves of *Colubrina texensis* sometimes are uncharacteristically large: blades of *Worthington 5994* (Kimble Co., TEX) are 25–40 x 10–20 mm. Other collections from the Edwards Plateau as well as elsewhere (e.g., Webb and Willacy cos.) approach this size.

COLUBRINA STRICTA Engelm. ex Blankinship, Ann. Rep. Missouri Bot. Gard. 18: 163. 1907 [non Engelm. ex M.C. Johnston, Southw. Naturalist 14: 257. 1969]. TYPE: **USA. Texas.** [Comal Co.:] Comanche Spring, New Braunfels, Jun 1850, *F. Lindheimer 711* (holotype: MO!; isotypes: F digital image!, MO!, NY digital image!, TEX-2 sheets! Fig. 5). *Lindheimer 712* (TEX!) has identical collection data but is a paratype; *Lindheimer 713* and *714* (all from June 1850) also are *C. stricta*, fide Blankinship (1907).

Johnston (1969) felt obliged to validate the species name, pointing out that Blankinship in 1907 had not provided a Latin diagnosis. Use of Latin was not a code requirement, however, until 1935, thus Johnston's provision was superfluous. Blankinship referred to Asa Gray's comments under *Colubrina texensis* (Plantae Wrightianae 1: 33. 1852), which referred to Lindheimer's plants as "what I take for a larger-leaved variety of C. Texensis, but which Dr. Engelmann, under the name of *Colubrina stricta*, considers as specifically distinct;" following that, Gray repeated a brief description of the variant by Engelmann and added observations of his own. Blankinship validated the name by formally citing "The type collection" for *Colubrina stricta*.

Colubrina texensis var. *pedunculata* M.C. Johnston, Wrightia 3: 94. 1963. TYPE: **MEXICO. Coahuila**. Mountains, Jimulco, 27 Apr 1885, *C.G. Pringle 144* (holotype: US digital image!; isotypes: F digital image!, NY digital image!, PH digital image!, TEX!). Johnston (1971) cited this: "(HOLOTYPE: US! ISOTYPES: A, BR, E, F, G, GH, GOET, K, P, PH, UPS, etc. !)."

Erect shrubs 1–2 m, stems straight or slightly zig-zag, loosely sericeous to glabrate. **Leaves** deciduous, alternate, blades ovate to ovate-oblong, 3–7.5 cm, pinnately veined with (3–)4–5 pairs of arcuate lateral veins (basal pair slightly more prominent), thin, sparsely strigose and glabrate above, persistently sparsely villous at least among the veins beneath, margins flat, serrulate with 40–70 villous-tufted teeth per side, apices rounded to acute, bases rounded to truncate, petioles 3–10 mm. **Flowers** 6–15 in axillary thyrses; peduncles 2–8 mm; fruiting pedicels 5–6 mm. **Capsules** 7–8 mm.

Flowering Mar–Jun. Rocky open slopes; 250–1550 m; Tex.; Mexico (Chihuahua, Coahuila, Durango, Nuevo León). Figures 1, 2, 3, and 4.

Additional collections examined from the **USA. Texas**. El Paso Co.: Hueco Mts, Hueco Tanks State Historical Park, at base of syenite boulders on talus slope, substrate of syenite gravels and sands, S exposure, well sheltered from north, one of 6–10 shrubs to 2 m, with *Brickellia*, *Morus microphylla*, etc., 7 Oct 1977, *Ralph, McCollough,* and *Burnett s.n.* (BRIT 2 sheets, TEX); Hueco Tanks State Park, 1210 m, 16 Apr 1991, *Simpson 914161* (SMU) and *914162* (SMU); Hueco Tanks State Historical Park, no date, *Van Devender s.n.* (TEX); Hueco Tanks State Historical Park, 17-19 Apr 1970, *Wellborn* and *Oefinger s.n.* (TEX); Hueco Tanks State Park, S side of North Mountain, 19 May 1979, *Worthington 4516* (BRIT, TEX).

The type of *Colubrina stricta* was collected by Ferdinand Lindheimer in 1850 in Comal County, more than 200 miles northeast of the nearest populations of the species in Mexico. As noted by Poole et al. (2007, p. 155), "Although many botanists have searched the area, *C. stricta* has not been rediscovered in Comal County." Typical *C. texensis* is abundant in Comal Co. and many collections have been made, including a number by Lindheimer in the same period in which he collected *C. stricta* (see specimen citations above).



Figure 4. Pedunculate thyrse of *Colubrina stricta*. Coahuila, *Pringle 144*, NY isotype of *C. texensis* var. *pedunculata*.


UNIVERSITY OF TEXAS HERBARIUM
Exchange received from the Lloyd Shinners Collection, 1998-2004
The Botanical Research Institute of Texas (BRIT)
ISOTYPE OF:
Colubrina stricta Engelm. ex M. C. Johnst.
Southw. Naturalist 14(2): 257. 1969.
University of Texas - Austin (LL, TEX)
00208267
LINDHEIMER, FLORA TEXANA.
(SUPPLEMENTARY TO "FLORA TEXANA EXSICCATA.")
DISTRIBUTED BY THE MISSOURI BOTANICAL GARDEN.
COLUBRINA STRICTA, ENGELM.
Collected by Lindheimer from 1849 to 1851 June 1850
Comanche Spring: New Braunfels, etc. No. 711

Figure 5. *Colubrina stricta*. Comal Co., Texas. *Lindheimer 711*, isotype, TEX.

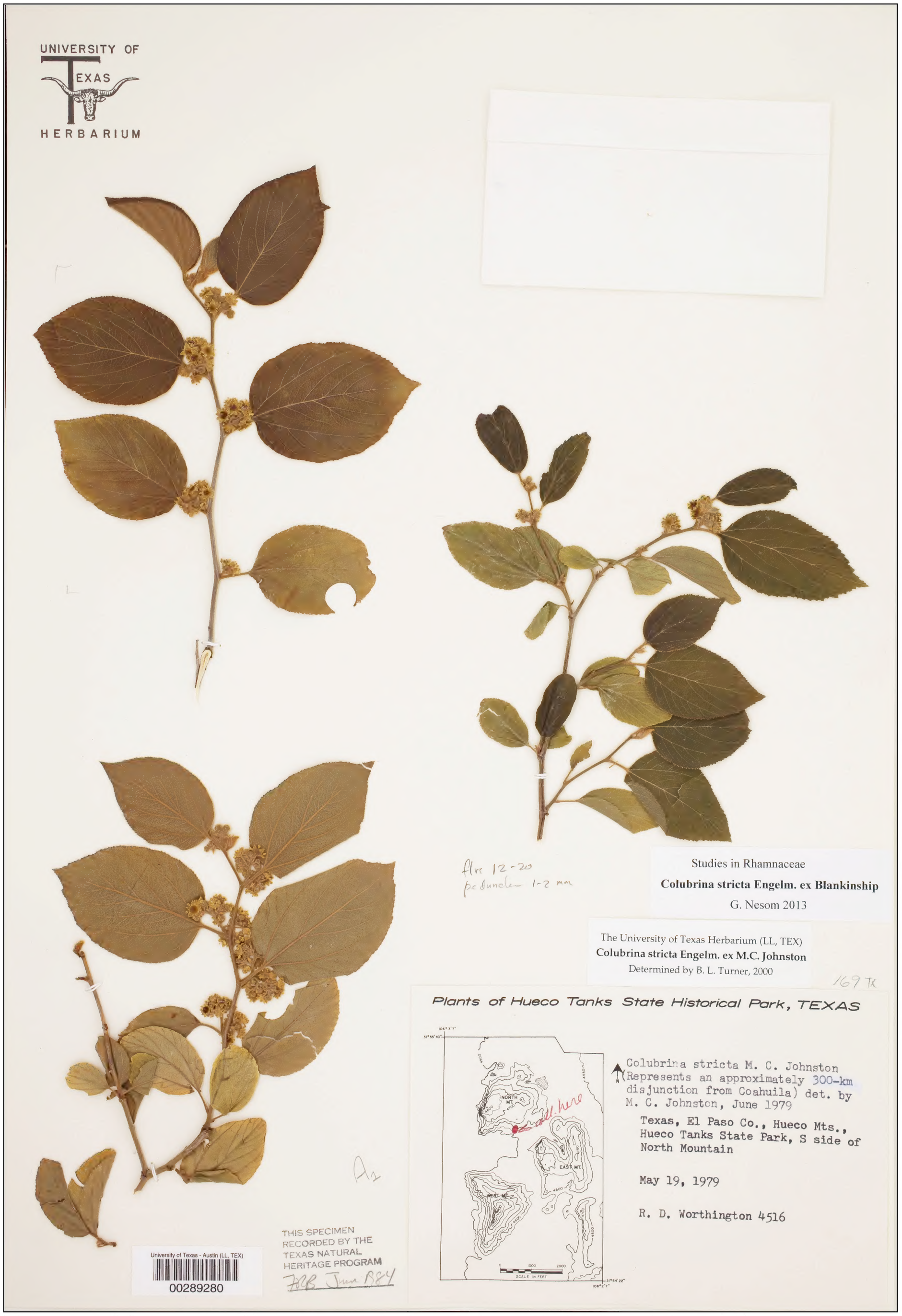

UNIVERSITY OF TEXAS HERBARIUM
flrs 12-20
pedunclen 1-2 mm
Studies in Rhamnaceae
Colubrina stricta Engelm. ex Blankinship
G. Nesom 2013
The University of Texas Herbarium (LL, TEX)
Colubrina stricta Engelm. ex M.C. Johnston
Determined by B. L. Turner, 2000
169 Tx
Plants of Hueco Tanks State Historical Park, TEXAS
Colubrina stricta M. C. Johnston
(Represents an approximately 300-km disjunction from Coahuila) det. by M. C. Johnston, June 1979
Texas, El Paso Co., Hueco Mts., Hueco Tanks State Park, S side of North Mountain
May 19, 1979
R. D. Worthington 4516
NORTH MT.
EAST MT.
WEST MT.
SCALE IN FEET
THIS SPECIMEN RECORDED BY THE TEXAS NATURAL HERITAGE PROGRAM
University of Texas - Austin (LL, TEX)
00289280

Figure 6. *Colubrina stricta*. Uncharacteristic leaf morphology of isolated population in El Paso, Co., Texas.

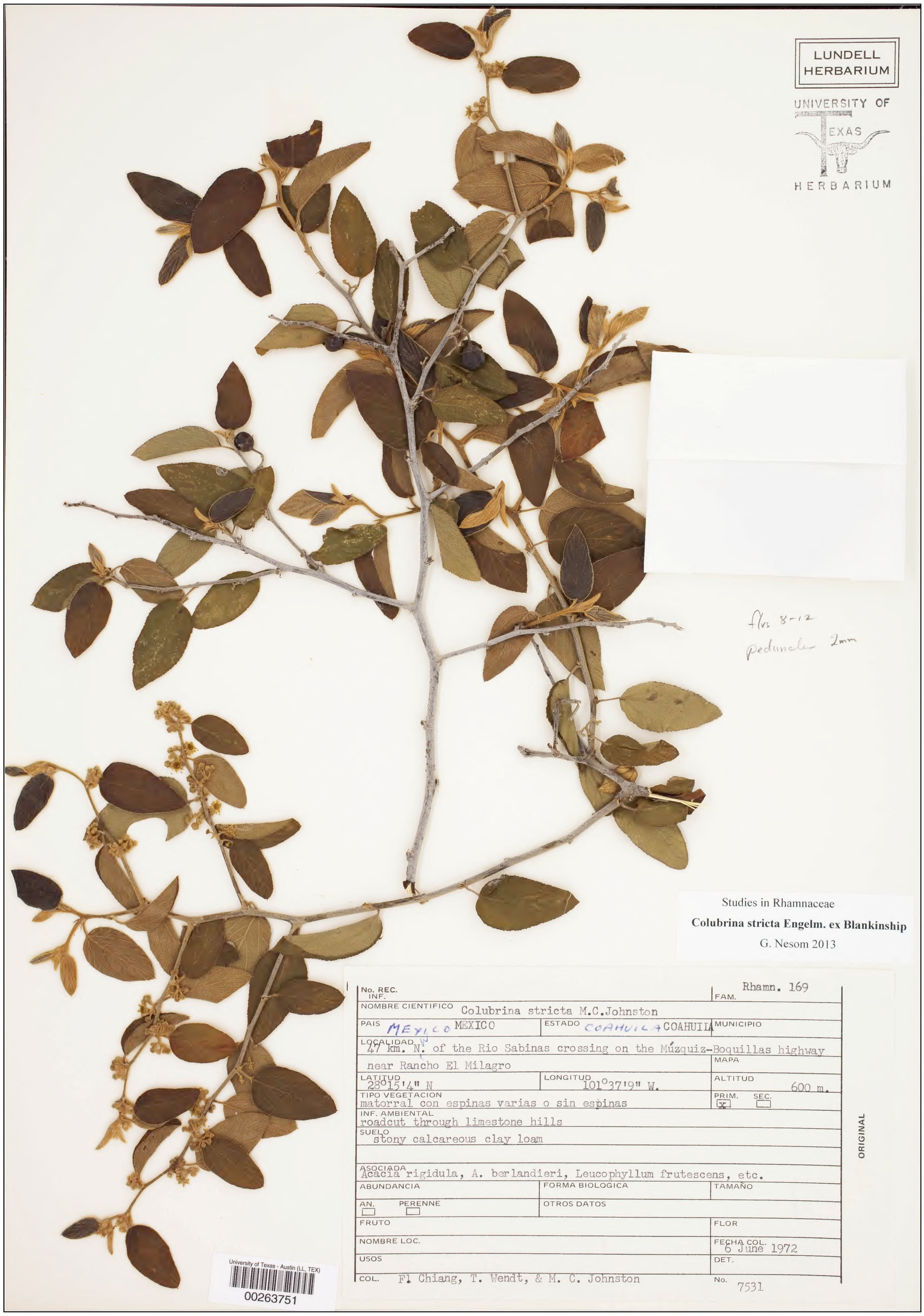


Figure 7. *Colubrina stricta*. Characteristic mophology in northern Coahuila. Compare with Figure 5.

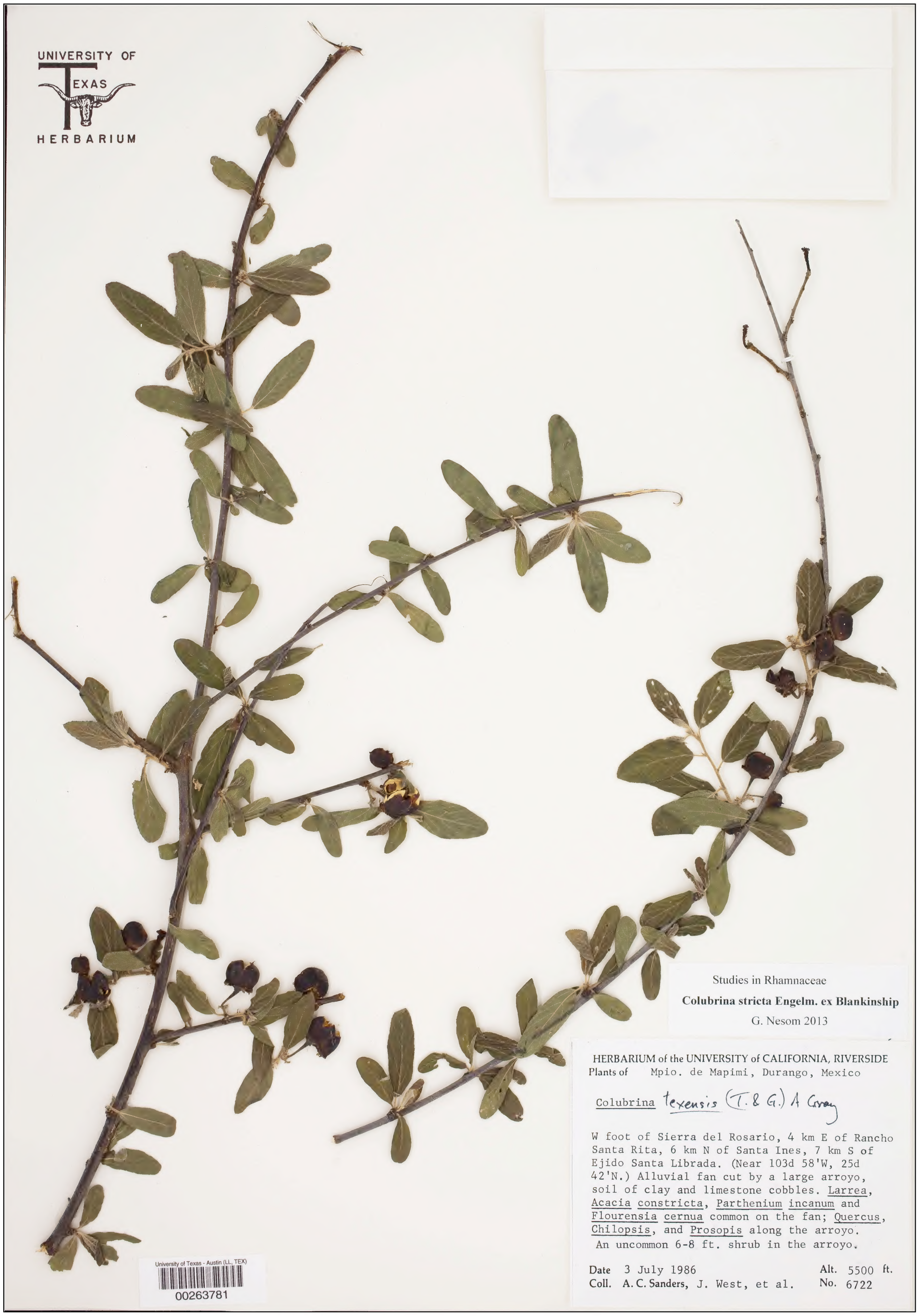

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HERBARIUM
Studies in Rhamnaceae
Colubrina stricta Engelm. ex Blankinship
G. Nesom 2013
HERBARIUM of the UNIVERSITY of CALIFORNIA, RIVERSIDE
Plants of Mpio. de Mapimi, Durango, Mexico
Colubrina texensis (T. & G.) A Gray
W foot of Sierra del Rosario, 4 km E of Rancho Santa Rita, 6 km N of Santa Ines, 7 km S of Ejido Santa Librada. (Near 103d 58'W, 25d 42'N.) Alluvial fan cut by a large arroyo, soil of clay and limestone cobbles. Larrea, Acacia constricta, Parthenium incanum and Flourensia cernua common on the fan; Quercus, Chilopsis, and Prosopis along the arroyo. An uncommon 6-8 ft. shrub in the arroyo.
Date 3 July 1986
Alt. 5500 ft.
Coll. A. C. Sanders, J. West, et al.
No. 6722
University of Texas - Austin (LL, TEX)
00263781

Figure 8. *Colubrina stricta*. Leaf shape variant from northeastern Durango.

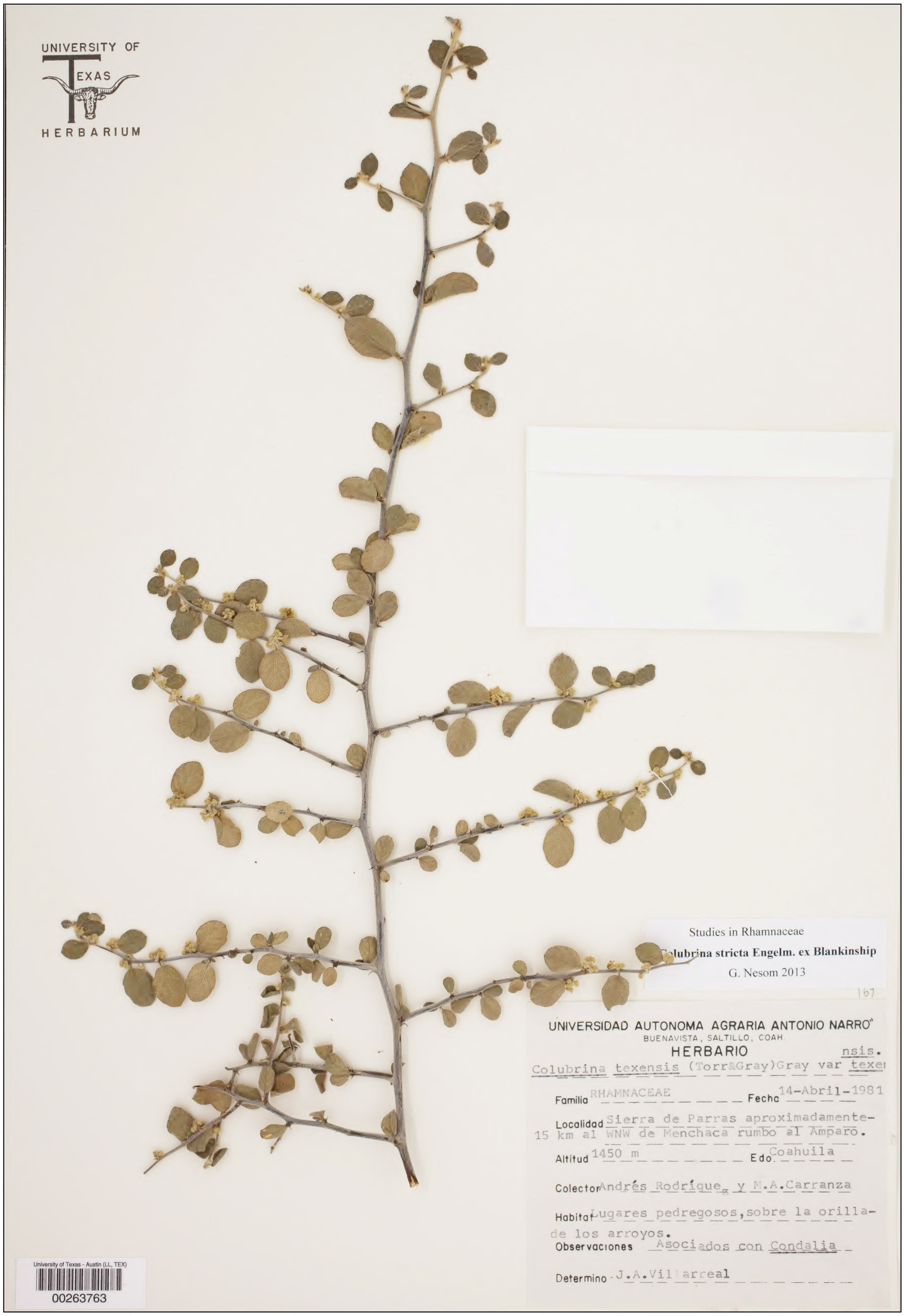


Figure 9. *Colubrina stricta*. Leaf shape variant from south-central Coahuila.

Plants identified as *Colubrina stricta* in El Paso County (e.g., Powell 1998; Poole et al. 2007) are considerably out of range (disjunct to the northwest) and include variants atypical at least in leaf morphology (Fig. 6). Yet they cannot be placed with any other species and surely are outlyers of *C. stricta*. Uncharacteristic leaf variants occur as well in other parts of the range (Figs. 8, 9).

Johnston (1969) speculated that *Colubrina stricta* might be of hybrid origin, derived from crosses between *C. texensis* and *C. greggii*. The leaf margins of *Colubrina texensis* and *C. stricta*, however, are not as finely serrulate as those of *C. greggii* and the epidermis of young stems of both species are characteristically covered by a layer of distinctly white wax, which *C. greggii* does not produce. He also allowed that *C. stricta* might be "a xeromorphic derivative of *C. greggii*."

Johnston (1971) noted that he observed an intermediate between var. *texensis* and var. *pedunculata* (*Wynd 759*, TEX) from the area of Múzquiz, Coahuila, which is at the southern edge of the range of typical *C. texensis*. Johnston also cited a texensis-pedunculata intermediate from Terrell Co., Texas (*Hinckley 142*, TEX). Presumably, these putative intermediates were significantly weighted in his decision to treat var. *pedunculata* as conspecific with typical *C. texensis*, but the taxonomic rationale was not explicit and it is not clear what features of the Terrell County collection suggested to Johnston that it was a hybrid (especially since *C. stricta* does not occur in the vicinity). Other TEX collections of typical *Colubrina texensis* from Terrell Co. differ in no significant way from *Hinckley 142*. An unambiguous intermediate between var. *texensis* and var. *pedunculata* has not been observed. In any case, even if an occasional hybrid is formed, it would not provide a strong rationale for treating the two as conspecific. They are at least as morphogically distinct as other related species of *Colubrina*.

The *Colubrina greggii* complex.

Johnston (1971) recognized three varieties within *Colubrina greggii*: (1) var. *yucatanensis* of the Yucatan peninsula, long-disjunct from the main range of the species, (2) var. *angustior*, which he termed a "tropical Gulf coastal-plain race," and (3) typical var. *greggii*. With a slightly different perspective an abundance of collections confirming their consistency in morphology, each of the three entities is treated here at specific rank. The Yucatan plants are distinct in morphology and isolated by a long distance from their presumably nearest relatives. The 'angustior' taxon is distinct in morphology and apparently is at least partially sympatric with typical *C. greggii;* no unambiguous intermediates have been encountered. *Colubrina greggii* var. *macrocarpoides* Suess. ex Suess. & Overkott, (Repert. Spec. Nov. Regni Veg. 50: 325. 1941) is a large-fruited entity that was transferred by Johnston (1963) to *Colubrina macrocarpa* (Cav.) G. Don and maintained at varietal rank.

KEY TO *COLUBRINA GREGGII* AND ITS CLOSEST RELATIVES

1. Leaf blades ovate to lanceolate-ovate or elliptic-ovate, widest below the middle, apex usually distinctly acuminate, commonly long and sharply acuminate; shrubs 2–3 m or trees up to 5 m; leaf blades (4–)6–18 x 3–8(–10) cm; flowers (10–)20–80 per thyrse ..... **Colubrina greggii**
1. Leaf blades oblong-lanceolate, widest near or at the middle, apex acute to very slightly acuminate; shrubs 1–2.5 m; leaf blades 3–10 x (1–)2–4 m; flowers 6–12 per thyrse ..... **Colubrina angustior**

1. Leaf blades ovate to lanceolate-ovate or elliptic-ovate, widest below the middle, apex usually distinctly acuminate, commonly long and sharply acuminate; peduncles 5–12 mm **Colubrina greggii**
1. Leaf blades oblong-lanceolate, widest near or at the middle, apex acute to slightly and short-acuminate; peduncles (5–)14–18 m ..... **Colubrina yucatanensis**

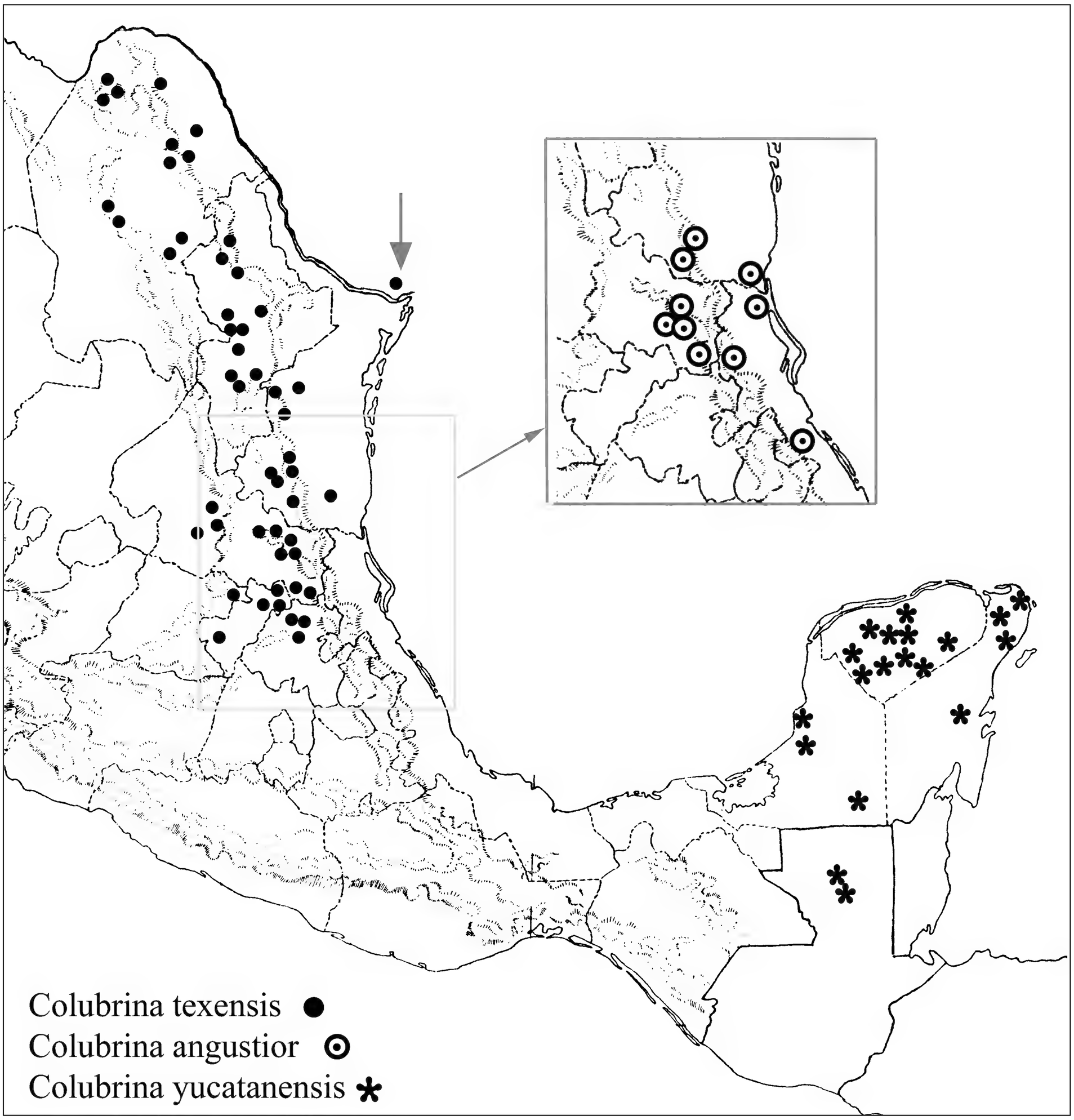


Figure 10. Distribution of *Colubrina greggii*, *C. angustior*, and *C. yucatanensis*. Broad arrow points to the locality in Cameron Co., Texas.


92793
The University of Texas Herbarium (LL, TEX)
Colubrina greggii S. Wats.
Determined by B. L. Turner, 2000
THE UNIVERSITY OF TEXAS HERBARIUM
this was collected in
Southmost palm grove
SE. of Brownsville - MCJ.
M. C. JOHNSTON
169
HERBARIUM of The UNIVERSITY OF TEXAS
No.
Colubrina greggii S. Watts
Locality Cameron Co.
Date Summer 1941 Coll. Mrs. G. W. Davis
UNIVERSITY OF TEXAS HERBARIUM
University of Texas - Austin (LL, TEX)
00289279

Figure 11. *Colubrina greggii*. Acute to barely acuminate apices, Cameron Co., Texas.



Figure 12. *Colubrina greggii*. Broadly ovate blades, abruptly acuminate apices, central Nuevo León.



Figure 13. *Colubrina greggii*. Long-acuminate apices, central Nuevo León.


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Instituto de Ecología
Centro Regional del Bajío
PLANTAS MEXICANAS
Colubrina greggii var. greggii S. Wats.
Fam. Rhamnaceae N. v.
Loc. 1 km al SE de Escanelilla, municipio de Pinal de Amoles
Estado QUERETARO Fecha 19.V.1988
Hab. bosque de galeria de Platanus mexicana, sobre el río
Alt. 1280 m.
Col. S.Zamudio y E.Carranza No. 6494
Observ. árbol de 6 a 7 m de alto; flores verdosas; abundante
Det. R. Fernández
University of Texas - Austin (LL, TEX)
00263983

Figure 14. *Colubrina greggii*. Long-acuminate apices, Querétaro.

COLUBRINA GREGGII S. Wats., Proc. Amer. Acad. Arts 17: 336. 1882. **LECTOTYPE** (Johnston 1971): **MEXICO. Nuevo León**. Monterrey, 1846–1849, *J. Gregg 154* (GH; isolectotype: MO!).

Colubrina celtidifolia var. *minute-serrata* Susseng., Repert. Sp. Nov. 51: 204. 1942. **TYPE**: **MEXICO. Tamaulipas**. Ciudad Victoria, 320 m, 1907, *E. Palmer 376* (holotype: M). Fide Johnston (1971).

Shrubs 2–3 m or **trees** up to 5 m. **Leaves**: blades ovate to lanceolate-ovate or elliptic-ovate, widest below the middle, (4–)6–18 x 3–8(–10) cm, lateral veins 4–5(–6) pairs, apex distinctly acuminate, commonly long and sharply acuminate, short-acuminate to acute in northern Tamaulipas and southern Texas, base rounded to truncate or slightly cordate. **Peduncles** 5–12 mm. **Flowers** (10–)20–80 per thyrse. **Distribution**: USA: Texas. Mexico (Coahuila, Hidalgo, Guanajuato, Hidalgo, Nuevo León, [Oaxaca, Puebla], Queretaro, San Luis Potosi, Tamaulipas, Veracruz).

In the statement of overall range for typical *Colubrina greggii*, Fernandez (1996) indicated that it extends to Guerrero, Puebla, and Veracruz, but the relatively limited nature of the present study has not enabled confirmation of those records.

Johnston (1971) supposed that the plants of *Colubrina greggii* first found in Cameron County, Texas, in 1941 were extinct, but recent observations indicate that the species still persists there. The Cameron County population is considerably disjunct northward from the main range, but the relatively atypical leaf morphology (acute to barely acuminate apices, e.g., Fig. 11) is shared with plants from central Tamaulipas, particularly those in the Sierra de San Carlos.

Texas. Cameron Co.: In remnant Sabal palm grove on Rio Grande delta, "Triangle Grove" near E end of Longoreno Banco No. 3., ca. 2.2–2.3 air mi SE of jct of Southmost Rd. (FM 1419) and Indiana Ave. (FM 3068), on Southmost Ranch Preserve, elev. 20 ft, 4 or 5 somewhat scandent shrubs to 2–3 m tall in friable loamy soil, 20 Feb 2003, *Carr and Pons 21700* (TEX 2 sheets) and *Pons s.n.* (TEX); no other locality data, summer 1941, *Mrs. A.M. Davis s.n.* (TEX).

COLUBRINA ANGUSTIOR (M.C. Johnston) Nesom, comb. et stat. nov. *Colubrina greggii* var. *angustior* M.C. Johnston, Brittonia 23: 37. 1971. **TYPE**: **MEXICO. Tamaulipas**. Vicinity of Tampico, ca. 15 m, 15 Jan 1910, *E. Palmer 582* (holotype: US digital image!; isotypes: K, MO!).

Shrubs 1–2.5 m. **Leaves**: blades oblong-lanceolate, widest near the middle, 3–10 x (1–)2–4 m, lateral veins (4–)5–6 pairs, apex acute to very slightly acuminate, base rounded to truncate. **Peduncles** 2–10 mm. **Flowers** 6–12 per thyrse. **Distribution**: Mexico: San Luis Potosi, Tamaulipas, Veracruz.

Fernandez (1996) recognized the occurrence of *Colubrina greggii* var. *angustior* in Queretaro and Guanajuato, but based on collections I have seen from that region, those plants are identified here as particularly long-acuminate variants of typical *C. greggii*. This leaf form apparently is most common in the southern part of the range but appears sporadically north to Nuevo León (e.g., see Figs. 13, 14). The leaf shape of typical *C. angustior* (Fig 15) is distinct. For the flora of Veracruz, Fernández (1986) recognized only the occurrence of var. *angustior*, and that appears to be confirmed here.


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! Nesom 2013
169 LA
Fryxell & Anderson 3428 MICH ex TEX
Colubrina greggii Wats. var. angustior M.C.J.
Marshall C. Johnston 1985
University of Texas - Austin (LL, TEX)
00265211
U.S. Department of Agriculture
Agricultural Research Service — Crops Research Division
Cotton Branch Herbarium
MEXICO: SAN LUIS POTOSI: Mpio. Cd. Valles:
Rancho Pago Pago, 3.5 miles by road W of Chantol,
near juncture of Río Mesillas and Río Mico; alt.
110 m; banks of river; widely branched shrub
1 m tall with greenish white flowers; occasional.
(Rhamnaceae)
Collector: P. A. Fryxell & W. R. Anderson
Date: 16 May 1981
No. 3428

Figure 15. *Colubrina angustior*. Representative leaf morphology, San Luis Potosí.


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LA
Colubrina greggii Wats. var. yucatanensis M. C. Johnst.
M. C. Johnston 1984
MEXICO
No. 20101
QUINTANA ROO: 20-22 km W of Puerto Morelos, and 3-5 km W of Vallarta; elev. 10 m. Medium-high deciduous forest.
Roadside. Shrub 75 cm tall.
5 May 1982
G. Davidse, M. Sousa, A. Chater & E. Cabrera
Supported by Instituto de Biología, U.N.A.M. (MEXU)
MISSOURI BOTANICAL GARDEN HERBARIUM (MO)
University of Texas - Austin (LL, TEX)
00265216

Figure 16. *Colubrina yucatanensis*. Representative leaf morphology and long peduncles, Quintana Roo.

COLUBRINA YUCATANENSIS (M.C. Johnston) Nesom, comb. et stat. nov. *Colubrina greggii* var. *yucatanensis* M.C. Johnston, Wrightia 3: 95. 1963. **TYPE: MEXICO. Yucatán**. Chichen Itza, near Sacred Cenote, in low second growth, 29 May 1938, *C.L. Lundell & A.A. Lundell 7310* (holotype: LL digital image!; isotype: US-digital image!).

Shrubs 1–4 m or trees up to 12 m, trunks up to 4 inches in diam. **Leaves**: blades oblong-lanceolate, widest at the middle, 6–12 x 3–7 m, lateral veins 5–7(–9) pairs, apex acute to slightly and short-acuminate, base rounded to truncate. **Peduncles** (5–)14–18 mm. **Flowers** yellow-green to greenish, 30–80 per thyrse. **Distribution**: Mexico: Campeche, Quintana Roo, Yucatan. Guatemala: Petén.

Colubrina greggii var. *yucatanensis* is remarkably constant in morphology (Fig. 16), and while the distinction from typical *C. greggii* might be seen as relatively slight, the differences in leaf shape and peduncle length are consistent and the geographic disjunction (Fig. 10) enforces the isolation between the two.

Many collections of *Colubrina yucatanensis* from Mexico are cited from TEX-LL and XAL via REMIB-CONABIO (2013). Those seen in the present study from Guatemala are cited here.

Guatemala. **Dept. Petén**: Remate, bordering Piedras Blancas, in clearing, 19 Apr 1960, *Contreras 861* (LL); Remate, between Remate and Piedras Blancas, 26 Apr 1960, *Contreras 899* (LL); Lake Petén Itza, Santa Elena, in low forest on top of La Cueva de Jobitzinaj hills, 20 Mar 1968, *Contreras 7631* (LL); Lake Petén Itza, San Andres Road, in low forest, 10 Feb 1970, *Contreras 9642* (LL); N shore of Lake Petén, near jct of road to Tibal and Flores, 13 Jul 1972, *Dwyer 10224* (LL).

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